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## TWENTY NEW AMERICAN BATS.

BY GERRIT S. MILLER, JR.

This paper, published here by permission of the Secretary of the Smithsonian Institution, contains descriptions of twenty new American bats, the types of nineteen of which are in the United States National Museum. Six of these belong to the series of Mexican bats in the Biological Survey collection, kindly placed at my disposal, together with those in his private collection, by Dr. C. Hart Merriam.

***Antrozous minor* sp. nov.**

*Type*.—Adult (skin and skull), No. 79,096, United States National Museum (Biological Survey collection). Collected at Comodon, Lower California, Mexico, September 20, 1895, by J. E. McLellan.

*Characters*.—Color as in the large *Antrozous pacificus* or slightly darker; size rather less than that of the small *A. pallidus*.

*Color*.—Dorsal surface buff, everywhere washed with wood-brown, but particularly on region behind shoulders. Under parts clear buff, paler than that of back and fading to cream-buff on middle of belly. Ears and membranes dark brown.

*Skull and Teeth*.—Skull narrower than that of the other species, the difference particularly noticeable in the posterior region of the braincase. Crown of upper premolar and of first and second upper molars much shorter in proportion to their width than in *A. pallidus* and *A. pacificus*. The lower molars are uniformly smaller than those of *A. pallidus*, but not different in form.

*Measurements*.—External measurements of type: Total length, 93; tail, 35; tibia, 20; foot, 10 (9); forearm, 48; thumb, 9.6; second digit, 40; third digit, 80; fourth digit, 68; fifth digit, 63; ear from meatus, 23; ear from crown, 19; width of ear, 16; tragus, 11.4.

Cranial measurements of an adult male from the type locality

(No. 96,491): Greatest length, 19 (21);<sup>1</sup> basal length, 17.6 (19); basilar length, 14 (15.4); interorbital constriction, 4 (4.6); zygomatic breadth, 11 (12.8); mastoid breadth, 9 (10); breadth of braincase above roots of zygomata, 8.6 (9); mandible, 13 (14.8); maxillary tooththrow (exclusive of incisors), 6.8 (8); mandibular tooththrow (exclusive of incisors), 7.6 (8).

*Specimens Examined*.—Five (four skins), all from the type locality.

*Remarks*.—*Antrozous minor* is a well-marked local species, combining the dark color of *A. pacificus* and the small size of *A. pallidus* with a peculiar form of the molar teeth.

***Pipistrellus cinnamomeus* sp. nov.**

*Type*.—Adult female (skin and skull), No. 100,231, United States National Museum (Biological Survey collection). Collected at Montechristo, Tabasco, Mexico, May 4, 1900, by E. W. Nelson and E. A. Goldman. Original number, 14,136.

*Characters*.—Largest known American *Pipistrellus*; forearm, 37; greatest length of skull, 15. Ear shorter than that of *P. subflavus*, but much narrower. Color uniform cinnamon throughout, the individual hairs of the back with practically no trace of tri-color markings.

*Ears*.—The ear resembles that of *Pipistrellus subflavus* in general form, but it is shorter and very much narrower. Tragus straight, much like that of *P. subflavus*, but narrower.

*Fur, Membranes, etc.*—The fur is shorter and less woolly than that of *P. subflavus*, and it lacks the abundant sprinkling of long hairs characteristic of the latter. At middle of back the hairs forming the body of the fur are about 5 mm. in length. Interspersed with these are others 1–2 mm. longer, but quite unnoticeable except on close examination. In distribution of fur, as well as in other characters of external form, *Pipistrellus cinnamomeus* appears to be identical with *P. subflavus*.

*Color*.—Fur everywhere cinnamon, slightly more yellow than that of Ridgway, particularly on the under parts. The individual hairs are dark slate color at base, but this does not appear at surface unless fur is disarranged. In favorable lights the cinnamon of the hairs on the back may be seen to become lighter as it approaches

<sup>1</sup> Measurements in parentheses are those of an adult female *Antrozous pallidus* from Silver City, New Mexico (No. 66,110).

the dark basal area, thus distantly suggesting a tricolor pattern. Ears and membranes brown, the free edge of the wing apparently lighter, but this is perhaps due to some irregularity in drying.

*Skull*.—The skull is much larger than that of *Pipistrellus subflavus*, in this respect slightly exceeding that of *Myotis lucifugus*. In form it is longer and narrower than in the other American species of *Pipistrellus*, a difference which is particularly noticeable in the rostrum and palate. Thus, while the length of the bony palate is 1.4 mm. greater than in a fully adult *P. subflavus*, the width between middle molars is no more and the distance between roots of upper incisors is probably a little less than in the smaller species. Lachrymal foramen large, its centre over posterior root of large premolar; distance from its lower edge to rim of alveolus less than width of large premolar measured along cingulum. In *P. subflavus* this distance is distinctly greater than width of tooth. Bony palate more produced behind line of last molar than in the allied species, the median projection large and well developed. Audital bullæ of same relative size as in *P. subflavus*.

*Teeth*.—Aside from their much greater size, the teeth do not differ notably from those of *Pipistrellus subflavus*. Inner upper incisor distinctly smaller than outer, not approximately equal to it as is the case in *P. subflavus*. First upper premolar as large as outer incisor, slightly internal to toothrow, but plainly visible from outer side. First and second upper molars with a distinctly indicated hypocone, no trace of which is present in *P. subflavus*. Lower incisors crowded into a continuous row between the canines, the crown of the outermost subterete. Other mandibular teeth essentially as in *P. subflavus*, except for their greater size.

*Measurements*.—External measurements of type: Total length, 99; tail, 44; tibia, 15.4; foot, 9.6 (8); forearm, 37; thumb, 6.8; second finger, 35; third finger, 63; fourth finger, 53; fifth finger, 47; ear from meatus, 11.4; ear from crown, 9; width of ear, 7.

Cranial measurements of type: Greatest length, 15 (13);<sup>2</sup> basal length, 14 (12); basilar length, 11.6 (9.8); palatal length (median, but posterior spine not included), 6 (4.8); width of palate between middle molars, 3 (3); interorbital constriction,

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<sup>2</sup> Measurements in parentheses are those of an adult *Pipistrellus subflavus* from Raleigh, N. C. (No 36,655).

4 (3.8); zygomatic breadth, 9 (8); breadth of braincase above roots of zygomata, 7.2 (6.4); mandible, 11.4 (9.8); maxillary tooththrow (exclusive of incisors), 5.8 (4.6); mandibular tooththrow (exclusive of incisors), 6 (4.6).

*Specimens Examined*.—One, the type.

*Remarks*.—This bat differs so widely from the other known American species of *Pipistrellus* as to need no special comparisons. Superficially it has much the appearance of an unusually red *Myotis lucifugus*, and only on examination of the teeth do the animal's true relationships become apparent.

A few individuals were found in an unoccupied house on the edge of the town of Montechristo. Apparently the species was uncommon.

***Dasypterus floridanus* sp. nov.**

*Type*.—Adult female (skin and skull), No. 111,379, United States National Museum. Collected at Lake Kissimmee, Fla., March 28, 1901, by Dr. Edgar A. Mearns. Original number, 5,183.

*Characters*.—Color as in the large *Dasypterus intermedius* (H. Allen) and the small *D. xanthinus* (Thomas); size intermediate between these extremes.

*Measurements*.—External measurements of type: Total length, 129; tail, 52; tibia, 20; foot, 9 (8.4); forearm, 49; thumb, 10; second digit, 61; third digit, 98; fourth digit, 80; fifth digit, 65; ear from meatus, 17; ear from crown, 11; width of ear, 11.

Cranial measurements of type: Greatest length, 18 (19.8);<sup>3</sup> basal length, 16.2 (17.6); basilar length, 13.6 (14); median palatal length, 6 (6.4); interorbital constriction, 5 (5); zygomatic breadth, 13 (14); mastoid breadth, 10 (11); mandible, 14.8 (15); maxillary tooththrow (exclusive of incisor), 6.8 (7); mandibular tooththrow (exclusive of incisors), 7.8 (8).

*Specimens Examined*.—Eleven, from the following localities: Florida—Davenport, 1 (skin); Kissimmee, 3 (skins); Mullet Lake, 1; Old Town, 2 (skins); Louisiana—Lafayette, 2; Houma, 2 (1 skin).

*Remarks*.—*Dasypterus floridanus* differs from *D. intermedius* in the same manner as the Lower Californian *D. xanthinus*

<sup>3</sup> Measurements in parentheses are those of an adult topotype of *Dasypterus intermedius* (No. 1,439).

(Thomas), but to a much less degree. Indeed, it is probable that it intergrades with the Texan animal. The three specimens collected at Kissimmee by Dr. Mearns, taken in connection with those which I examined in 1897, show such constant differences from *D. intermedius* that it now seems best to recognize the Austro-riparian race by name. More detailed measurements of the two forms will be found in *North American Fauna*, No. 13, p. 117.

**NYCTINOMOPS** gen. nov. (*Molossidæ*.)

*Type*.—*Nyctinomops femorosaccus* Merriam.

*Characters*.—Externally like *Nyctinomus*. Skull similar to that of *Promops*, except that the premaxillaries are separated in front by a very narrow space. Teeth as in *Nyctinomus*, but upper incisors parallel, the two occasionally in contact with each other.

*Remarks*.—Although intermediate between *Nyctinomus* and *Promops*, the group of species of which *N. femorosaccus* is typical forms a very natural genus. Its members have usually been referred to *Nyctinomus*, but Dr. J. A. Allen<sup>4</sup> has recently placed two forms (*depressus* and *affinis*) in *Promops*. In those thus far known there are only four lower incisors. I have examined the following species: *Nyctinomops femorosaccus* (Merriam), *N. yucatanicus* sp. nov., *N. aurispinosus* (Peale), *N. laticaudatus* (E. Geoffroy), *N. orthotis* (H. Allen), *N. depressus* (Ward), *N. affinis* (J. A. Allen) and *N. macrotis* (Gray). It is probable that *Nyctinomus megalotis* Dobson is also a member of this genus.

***Nyctinomops yucatanicus*** sp. nov.

*Type*.—Adult female (skin and skull), No. 108,166, United States National Museum (Biological Survey collection). Collected at Chichen Itza, Yucatan, February 9, 1901, by E. W. Nelson and E. A. Goldman. Original number, 14,521.

*Characters*.—Size and general appearance as in *N. europs*, but ear larger and with better developed keel, nearly as in *N. femorosaccus*. Skull slightly larger than that of *N. europs*, the rostrum longer and interorbital region more nearly cylindrical. Teeth as in *N. europs*, but larger.

*Ears*.—The ear agrees in all details of form with that of *Nyctinomops femorosaccus*, due allowance being made for its smaller size. The keel, however, may be a little less developed, though its

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<sup>4</sup>*Bull. Amer. Mus. Nat. Hist.*, XIII, p. 91, May 12, 1900.

appearance may have been slightly altered by drying. It is quite different in form from that of *N. europs*, and not thickened at the edge as in *N. laticaudatus*. Antitragus large, in form exactly like that of *N. femorosaccus*, therefore higher in proportion to its width than in *N. laticaudatus* and *N. europs*. Tragus as in *N. femorosaccus*.

*Color*.—Dorsal surface uniform vandyke-brown, the hairs whitish at base, but not sharply bicolor. In certain lights the extreme tips of the hairs show a faint wash of wood-brown, and in others there is a strong sheen of bluish ecru-drab. Under parts like back, but strongly tinged with wood-brown. Ears and membranes dark brown.

*Skull*.—The skull is intermediate in size between that of *Nyctinomops europs* and the larger *N. laticaudatus* and *N. femorosaccus*. In form it shares to a certain extent the shortening of the rostrum that characterizes the Brazilian species, but this peculiarity is not carried as far, nor is the cylindric contour of the interorbital region noticeably impaired. The orifice of the anterior nares is more tubular than in *N. europs*, but less so than in *N. femorosaccus*.

*Teeth*.—The teeth agree in all respects with those of *Nyctinomops europs* except that the upper incisors are larger and more closely set.

*Measurements*.—External measurements of type: Total length, 98; tail, 42; tibia, 12.4; foot, 9 (7.8); forearm, 42; thumb, 8; second finger, 40; third finger, 81; fourth finger, 60; fifth finger, 42; ear from meatus, 15; ear from crown, 11.6; width of ear, 17; tragus, 1.8.

Cranial measurements of type: Greatest length, 17.2 (16.6);<sup>5</sup> basal length, 15 (14.8); basilar length (to posterior edge of palatal emargination), 13 (12.4); interorbital constriction, 3.4 (3.4); zygomatic breadth, 10 (9.4); greatest breadth of braincase above roots of zygomata, 8.8 (8); mandible, 12.4 (11.4); maxillary toothrow (exclusive of incisors), 6.4 (6.2); mandibular toothrow (exclusive of incisors), 7 (6.8).<sup>6</sup>

*Specimens Examined*.—Twelve, all from the type locality.

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<sup>5</sup> Measurements in parentheses are those of a paratype of *Nyctinomops europs* (♀, No. 101,502).

<sup>6</sup> Some of the measurements of a skull of *Nyctinomops femorosaccus* from Fort Huachuca, Arizona (No. 36,038) are: Greatest length, 19; basal length, 17; zygomatic breadth, 10; maxillary toothrow (exclusive of incisors), 7.6.

*Remarks.*—Although *Nyctinomops yucatanicus* is in many respects intermediate between the small *N. europs* and the larger *N. laticaudatus* and *N. femorosaccus*, it is a very distinct species. Its relationships are evidently with the larger forms, though superficially it bears a close resemblance to *N. europs*.

Mr. Nelson and Mr. Goldman secured the specimens in crevices of the ruins at Chichen, Itza. A bat which they supposed to be the same was seen at Tunkas and Merida.

***Molossus nigricans* sp. nov.**

*Type.*—Adult male (skin and skull), No. 90,941, United States National Museum (Biological Survey collection). Collected at Acaponeta, Tepic, Mexico, August 2, 1897, by E. W. Nelson and E. A. Goldman. Original number, 11,433.

*Characters.*—Slightly larger than *Molossus rufus* from Paraguay; color blackish-brown, the shoulders frequently though not invariably grayish. Red phase uncommon, brighter than that of *M. rufus*, but apparently less so than in *M. pretiosus*.

*Color.*—Type: Upper parts a uniform very dark seal-brown, interrupted on shoulders by a crescentic area of broccoli-brown about 10 mm. in width. This lighter color appears again as an ill-defined wash on head between ears. Under parts like back, but everywhere lightened by a wash of broccoli-brown, this most conspicuous on throat. Ears and membranes an indefinite blackish-brown. Red phase: The few specimens in the red phase have been immersed in alcohol for ten years and are therefore not to be trusted as regards color. They are now a uniform tawny, rather less bright than *M. pretiosus* in the same pelage.

Variation in color, as shown by the skins in the dark phase, is slight, and such as occurs is mostly a mere darkening of the general tint and the partial or complete obliteration of the shoulder crescent. In the majority of specimens, indeed, this crescent is absent.

*Skull and Teeth.*—The skull is about the same size as that of *Molossus rufus*, but the rostrum is heavier and the interpterygoid space and the palate are wider. On the other hand, the sagittal and lambdoid crests appear never to reach the extreme development seen in *Molossus rufus*.

Teeth as in *Molossus rufus*, but distinctly heavier throughout.

*Measurements.*—External measurements of type: Total length, 145; tail, 53; tibia, 18.6; foot, 12 (11); forearm, 52.6; thumb,



9; second finger, 48; third finger, 100; fourth finger, 80; fifth finger, 51.

Cranial measurements of type: Greatest length, 23.6 (23);<sup>1</sup> basal length, 19.8 (20); basilar length, 17.4 (17.4); median palatal length, 7.2 (7.2); interorbital constriction, 4.8 (4.2); zygomatic breadth, 15.2 (14); breadth of braincase above roots of zygomatica, 11.4 (11); greatest height of sagittal crest, 2.2 (3); mandible, 17 (16.6); maxillary tooththrow (exclusive of incisors), 8.8 (8); mandibular tooththrow (exclusive of incisors), 10 (9).

*Specimens Examined*.—Forty-six, from the following localities in Mexico: Chiapas—Huehuetan, 1, Tonila, 1; Colima—City of Colima, 17; Jalisco—Teuchitlan, 1; Oaxaca—Llano Grande, 1, Tehuantepec City, 2 (1 skin); Tamaulipas—Alta Mira, 1; Tepic—Acaponeta, 8 (3 skins); Tuxtla—San Andres, 1 (skin); Vera Cruz—Catemaco, 7 (3 skins); Yucatan—Chichen Itza, 7 (skins).

*Remarks*.—That this bat is numerous in parts of Mexico is shown by the following extract from the collectors' field notes: "Common about the houses in Acaponeta. During the day they conceal themselves under the tiles of roofs. One man told us that he had killed over three hundred of them shortly before our arrival while at work on his roof."

***Molossus pretiosus* sp. nov.**

1901. *Molossus rufus* Robinson and Lyon, Proc. U. S. Nat. Mus., XXIV, p. 156, October 3, 1901.

*Type*.—Adult male (skin and skull), No. 102,761, United States National Museum. Collected at La Guaira, Venezuela, July 13, 1900, by Wirt Robinson and M. W. Lyon, Jr. Original number, 106.

*Characters*.—Distinctly smaller than *Molossus rufus* from Paraguay; color rich dark reddish-brown, the shoulders frequently though not invariably chestnut. Red phase common, much brighter than in *Molossus rufus*.

*Color*.—Type: Upper parts seal-brown, somewhat more tinged with red than that of Ridgway. Shoulders washed with rufous. Under parts like back, but not as dark, and even more tinged with red. Chest sprinkled with whitish hairs. Ears and membranes blackish.

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<sup>1</sup> Measurements in parentheses are those of an adult male *Molossus rufus* from Sapucay, Paraguay.

There is much variation in color, as pointed out by Robinson and Lyon. The young and a few adults are practically black. In others the rufous is more conspicuous than in the type, sometimes invading the entire pelage to the exclusion of the dark brown. In the completely red specimens the exact shade varies from burnt umber to a rather dark tawny.

*Skull and Teeth.*—The skull and teeth are much smaller than in true *Molossus rufus*, but I can detect no tangible difference in form, beyond the rather less development of the sagittal and lambdoid crests.

*Measurements.*—External measurements of type: Total length, 123; tail, 44; tibia, 18; foot, 11.4 (10.8); forearm, 45.4; thumb, 8.2; second finger, 42; third finger, 90; fourth finger, 70; fifth finger, 47.

Cranial measurements of type: Greatest length, 21 (23);<sup>s</sup> basal length, 18 (20); basilar length, 16 (17.4); median palatal length, 7 (7.2); interorbital constriction, 4 (4.2); zygomatic breadth, 13 (14); breadth of braincase above roots of zygomata, 10.6 (11.4); greatest height of sagittal crest, 1.8 (3); mandible, (16.6); maxillary toothrow (exclusive of incisors), 8 (8); mandibular toothrow (exclusive of incisors), 8.8 (9).

*Specimens Examined.*—Seventy-one (44 skins), all from the vicinity of La Guaira.

*Remarks.* — Specimens from Sapucay, Paraguay, essentially topotypes of *Molossus rufus*, which have been received within the past few months, show that the bat from northern South America is an easily recognizable form. The Paraguay skins are all a uniform reddish-brown, very near the raw umber of Ridgway. They are very uniform in color and show no tendency toward the bright tints of *Molossus pretiosus* in the corresponding phase. Neither is there any suggestion of a black phase. As far as can be determined from the material now at hand, we have a large southern form, true *Molossus rufus*, which apparently lacks the black phase and in which the red phase is very dull; a large northern form, *M. nigricans*, in which the red phase is rare, and a small form, intermediate in range, with both phases of pelage well developed and characterized by great richness of color.

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<sup>s</sup> Measurements in parentheses are those of an adult male *Molossus rufus* from Sapucay, Paraguay.

***Nyctinomus antillularum* sp. nov.**

*Type*.—Adult male (in alcohol), No. 113,188, United States National Museum. Collected at Roseau, Dominica, W. I., August 5, 1901, by H. Selwyn Branch.

*Characters*.—In general similar to the common *Nyctinomus* of the Greater Antilles, but size even less, the length of forearm (in sixteen specimens) ranging from 36.5 mm. to 38.5 mm.

*Form, Color, etc.*—In color and external form this species shows no peculiarities as compared with the common representative of the *Nyctinomus brasiliensis* group, occurring in Cuba, Jamaica and Porto Rico. As in the latter, the ears are relatively smaller than those of the continental members of the genus, extending, when laid forward, just to nostril instead of distinctly beyond end of muzzle. The usual brown and red color phases are represented, but as all but two of the specimens at hand have been preserved in alcohol no exact comparison can be made.

*Skull and Teeth*.—The skull and teeth do not differ appreciably from those of Cuban specimens of the larger West Indian form. The first lower premolar is very minute and without distinct cingulum.

*Measurements*.—External measurements of type: Total length, 83; tail, 30; tibia, 12; foot, 6.6 (6); forearm, 47.4; thumb, 7; second finger, 38; third finger, 70; fourth finger, 58; fifth finger, 40; ear from meatus, 15; ear from crown, 11.4; width of ear, 15.

Cranial measurements of type: Greatest length, 16; basal length, 14.8; basilar length, 12; median palatal length, 6; inter-orbital constriction, 3.8; zygomatic breadth, 9; breadth of brain-case above roots of zygomata, 8; mandible, 11; maxillary toothrow (exclusive of incisors), 5.8; mandibular toothrow (exclusive of incisors) 6.

*Specimens Examined*.—Twenty-one, from the following islands: Dominica, 2; Montserrat, 1; St. Kitts, 6 (2 skins); St. Lucia, 11; Tobago, 1.

***Natalus major* sp. nov.**

*Type*.—Adult male (in alcohol), No. 101,395, United States National Museum. Collected near Savaneta, San Domingo, W. I., by W. M. Gabb.

*Characters*.—Like *Natalus stramineus*, but much larger: Forearm, 42; longest finger, 80; greatest length of skull, 18.

*External Form.*—Except for its greater size, *Natalus major* so closely resembles specimens of *N. stramineus* from Dominica as to require no detailed description.

*Skull and Teeth.*—While the skull resembles that of *N. stramineus* in form it is readily distinguished by its larger size and heavier structure. The braincase in particular is greatly inflated as compared with that of the smaller species. Rostrum with sides nearly parallel. The teeth are similar in form to those of *N. stramineus*.

*Measurements.*—External measurements of the type and of an adult female from the type locality: Total length, ♂ 110, ♀ 116; head and body, ♂ 49, ♀ 53; tail, ♂ 61, ♀ 63; tibia, ♂ 22.4, ♀ 23; foot, ♂ 9 (7.6), ♀ 9.8 (8); forearm, ♂ 42, ♀ 43; thumb, ♂ 6, ♀ 6; second digit, ♂ 44, ♀ 43; third digit, ♂ 80, ♀ 82; fourth digit, ♂ 61, ♀ 62; fifth digit, ♂ 57, ♀ 58; ear from meatus, ♂ 15, ♀ 16.6; ear from crown, ♂ 12, ♀ 12.

Cranial measurements of type: Greatest length, 18 (17),<sup>9</sup> basal length, 16.4 (15.6); basilar length, 14.6 (14); median palatal length, 9.8 (8.8); breadth of rostrum at base of canines, 4.4 (3.6); interorbital constriction, 3.6 (3.2); zygomatic breadth, 9.6 (9); greatest breadth of braincase, 9 (7.8); mandible, 14 (13); maxillary toothrow (exclusive of incisors), 8 (7.8); mandibular toothrow (exclusive of incisors), 8.4 (7.8).

*Specimens Examined.*—Two, both from the type locality.

*Remarks.*—*Natalus major* has been compared with eighteen specimens of *N. stramineus* from the island of Dominica. None of the latter at all closely approaches it in size.

***Natalus mexicanus* sp. nov.**

*Type.*—Adult female (in alcohol), No. 96,496, United States National Museum (Biological Survey collection). Collected at Santa Anita, Lower California, Mexico, in July or August, 1897, by J. F. Abbott.

*Characters.*—Smaller than *Natalus stramineus*; skull with rostrum more tapering anteriorly.

*Color.*—In color as in other external characters *Natalus mexicanus* apparently does not differ from *N. stramineus*. The only specimens of the latter that I have seen are, however, preserved in alcohol. Two well-defined color phases occur, a yellow and a

<sup>9</sup> Measurements in parentheses are those of an adult male *N. stramineus* from the island of Dominica (No. 113,605).

brown. In the former (represented by the type) the fur is everywhere ochraceous, that of the under parts uniform from base to tip of hairs, that of the back slightly washed with clay color. In the brown phase the fur is broccoli-brown, somewhat paler beneath the surface and on the under parts. All shades of intergradation between the two phases may be found in any series of specimens.

*Skull and Teeth.*—In general form the skull is like that of *N. stramineus*, but the braincase is smaller and the anterior part of the rostrum is more tapering, differences readily appreciable on comparison.

*Measurements.*—External measurements of type: Total length, 95; tail, 53; tibia, 19; foot, 7.6 (7); forearm, 35.4; thumb, 5; second finger, 37; third finger, 77; fourth finger, 56; fifth finger, 57; ear from meatus, 14; ear from crown, 12.

Cranial measurements of type: Greatest length, 16 (17);<sup>10</sup> basal length, 14 (15.6); basilar length, 13 (14); zygomatic breadth, 8 (9); interorbital constriction, 3 (3.2); greatest breadth of braincase above roots of zygomata, 7.6 (7.8); mandible, 12 (13); maxillary toothrow (exclusive of incisors), 7 (7.8); mandibular toothrow (exclusive of incisors), 7 (7.8).

*Specimens Examined.*—One hundred and seven, from the following localities in Mexico: Campeche—Apazote, 1 (skin); Durango—Chacala, 25; Jalisco—Ameca, 17; Itzatlán, 1 (skin); Lower California—San José del Cabo, 3; Santa Anita, 2; Sinaloa—near Mazatlán, 1; Plomasas, 9; Rosario, 42 (7 skins); Tuxtla—San Andrés, 4 (1 skin); Vera Cruz—Mirador, 2.

*Remarks.*—*Natalus mexicanus* differs from its South American representative in the same characters and to about the same extent as *Dermonotus fulvus* and *Chilonycteris mexicanus*. In all three cases intergradation probably takes place between the large southern form and the smaller northern one.

*Chilonycteris portoricensis* sp. nov.

*Type*—Adult female (skin and skull), No. 102,358, United States National Museum. Collected in cave near Pueblo Viejo, Porto Rico, W. I., March 19, 1900, by L. Stejneger and C. W. Richmond.

<sup>10</sup> Measurements in parentheses are those of an adult male *Natalus stramineus* from the island of Dominica (No. 113,605).

*Characters*.—Similar to the Cuban *Chilonycteris boothi* Gundlach, but with smaller ears.

*Color*.—Upper parts rather dark brown, the exact shade intermediate between the hair-brown and bistre of Ridgway. Under parts broccoli-brown washed with ecru-drab, particularly on throat. Wings and ears an indefinite blackish-brown.

*Skull and Teeth*.—The skull and teeth resemble those of *Chilonycteris boothi* in all respects. From that of the Jamaican *C. parnellii* the skull is similarly indistinguishable, but the teeth differ notably in the greater size of the second lower premolar. This tooth, crowded quite out of the toothrow in *C. parnellii*, so that the first and third premolars come fully in contact, is, in *C. boothi* and *C. portoricensis*, so placed as to separate the first and third by a distinct space readily noticeable when the toothrow is viewed from the outer side. This character, though apparently trivial, is perfectly constant in a series of seven specimens from Porto Rico, four from Cuba, and two from Jamaica.

*Measurements*.—External measurements of type: Total length (skin), 92; tail (skin), 22; tibia, 18.8; foot, 10 (9); forearm, 51.4; thumb, 8; second finger, 42; third finger, 85; fourth finger, 58; fifth finger, 58; ear from meatus, 20.

Cranial measurements of type: Greatest length, 20; basal length, 18.6; basilar length, 17; interorbital constriction, 4; lachrymal breadth, 7.4; zygomatic breadth, 11; mandible, 15; maxillary toothrow (exclusive of incisors), 8.8; mandibular toothrow (exclusive of incisors), 9.

*Remarks*.—The forms of the *Chilonycteris parnellii* group from Cuba, Jamaica and Porto Rico may be distinguished by the following key:

First lower premolar in contact with third, the second crowded out of toothrow on lingual side, . . . . . *C. parnellii*.  
 First lower premolar not in contact with third, the second in toothrow, though usually displaced toward lingual side:  
     Ear from meatus 23–24 mm., . . . . . *C. boothi*.  
     Ear from meatus 19–21 mm., . . . . . *C. portoricensis*.

*Chilonycteris mexicana* sp. nov.

*Type*.—Adult male (skin and skull), No. 89,277, United States National Museum (Biological Survey collection). Collected at

San Blas, Tepic, Mexico, June 9, 1897, by E. W. Nelson and E. A. Goldman. Original number, 11,132.

*Characters*.—Similar to *Chilonycteris rubiginosa*, but size smaller and color (in brown phase) much less dark.

*Color*.—Brown phase, represented by the type: Dorsal surface a uniform brown, most closely resembling the broccoli-brown of Ridgway, but darker and with a mixture of both hair-brown and drab. The individual hairs are nearly uniform throughout their length, though the bases are faintly darker and the tips lighter. Under parts wood-brown, much lighter than Ridgway's Plate III, fig. 19, the hairs distinctly dark slaty-brown at base. Ears and membranes brown, somewhat darker than body.

Yellow phase: Entire body and head tawny-ochraceous, the hairs of the upper parts uniform, those of the belly dull brown at base.

*Skull and Teeth*.—Except for their smaller size, the skull and teeth do not differ appreciably from those of *Chilonycteris rubiginosa*.

*Measurements*.—External measurements of type: Total length, 82; tail, 20; tibia, 19.4; foot, 11.6 (10); forearm, 54; thumb, 7; second finger, 45; third finger, 90; fourth finger, 71; fifth finger, 67; ear from meatus, 21.

Cranial measurements of type: Greatest length, 20 (22);<sup>11</sup> basal length, 19 (—); basilar length, 17 (19); interorbital constriction, 4.4 (4.4); lachrymal breadth, 7.8 (8.6); zygomatic breadth, 11.8 (13); mandible, 15 (17); maxillary toothrow (exclusive of incisors), 9 (10); mandibular toothrow (exclusive of incisors), 9.4 (11).

*Specimens Examined*.—Ninety-four (9 skins), from the following localities in Mexico: Colima—Hacienda Magdalena, near City of Colima, 14; Durango—Chacala, 8; Jalisco—Ameca, 5, Bolaños, 4 (1 skin), near Ometepepec, 3; Morelos (exact locality not known), 4; Oaxaca—Huilotepic, 1 (skin); Tepic—San Blas, 55 (7 skins).

*Remarks*.—The large *Chilonycteris rubiginosa* is represented in the National Museum collection by three specimens, one from Chontales, Nicaragua, and two from the island of Trinidad. They agree very closely in size, forearm 61–62 mm., and are not approached by any of the ninety-four specimens of *C. mexicana*. They are also much darker in color.

<sup>11</sup> Measurements in parentheses are those of an adult *Chilonycteris rubiginosa* from Chontales, Nicaragua (No. 37,515).

At San Blas *Chilonycteris mexicana* was very common in a small narrow cave which extended like a deep crevice into the base of the cliff on the hillside facing the town.

***Mormoops tumidiceps* sp. nov.**

*Type*.—Adult male (in alcohol), No. 5,581, collection of Dr. C. Hart Merriam. Collected in the Point Gourde Caves, Trinidad, 1889, by Sir William Robinson.

*Characters*.—Externally similar to *Mormoops megalophylla*; skull larger and more swollen than that of the Mexican animal.

*Color and other External Features*.—After many years' immersion in alcohol the specimen presents no external characters to distinguish it from *Mormoops megalophylla*.

*Skull and Teeth*.—The skull differs from that of *Mormoops megalophylla* in greater size, due to increased breadth of both rostrum and braincase, though particularly of the latter. There is no other evident difference in form. Teeth as in *M. megalophylla* except that the premolars both above and below are slightly larger, a difference which may readily prove to be no more than individual.

*Measurements*.—External measurements of type: Total length, 92; tail, 26; tibia, 22; foot, 11 (10.4); forearm, 55; thumb, 7; second digit, 50; third digit, 102; fourth digit, 73; fifth digit, 65; ear from meatus, 14; ear from crown, 8.

Cranial measurements of type: Greatest length, 15 (14.6);<sup>12</sup> basal length, 15 (14.6); basilar length, 13.2 (13); median palatal length, 8.6 (8.4); least interorbital breadth, 5.6 (5); lachrymal breadth, 7.4 (7); zygomatic breadth, 9.8 (9.2); mastoid breadth, 9.2 (8.6); greatest breadth of braincase, 10 (8.8); mandible, 13 (12.8); maxillary toothrow (exclusive of incisors), 8.2 (8); mandibular toothrow (exclusive of incisors), 8.8 (8.4).

*Specimens Examined*.—One, the type.

*Remarks*.—The differences between *Mormoops megalophylla* and *M. tumidiceps* are of the same kind and extent as those separating *Natalus mexicanus* from *N. stramineus* and *Chilonycteris mexicana* from *C. rubiginosa*. The Trinidad *Mormoops* is very different from the small *M. intermedius* of Curaçao.

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<sup>12</sup> Measurements in parentheses are those of an adult male *Mormoops megalophylla* from Tampico, Mexico (No. 60,378).



***Dermanura rava* sp. nov.**

*Type*.—Adult ♂ (skin and skull), No. 113,338, United States National Museum. Collected at San Javier, northern Ecuador, August 10, 1900, by G. Fleming. Original number, 12.

*Characters*.—Smaller than *Dermanura cinerea* and *D. tolteca* and color much paler; ear with narrow whitish border. Skull smaller than that of *D. tolteca*, the palatine foramina much more numerous.

*Color*.—General color a light yellowish-brown, intermediate between the cream-buff and clay color of Ridgway, the upper parts, especially the region behind shoulders, washed with broccoli-brown. Face with four ill-defined whitish stripes. Ears and membranes light brown, the former distinctly edged with whitish.

*Skull*.—Except for its noticeably smaller size, the skull does not differ from that of *D. tolteca* in general appearance. It is distinguishable, however, by the number of small foramina in the palate, which persist as two conspicuous rows of small perforations even in very old individuals.

*Teeth*.—The teeth are similar to those of *Dermanura tolteca*, except that they are uniformly smaller.

*Measurements*.—External measurements of type (from well-made skin): Head and body, 55; tibia, 14; foot, 9.6 (8.6); forearm, 36; thumb, 10; second digit, 32; third digit, 82; fourth digit, 62; fifth digit, 59; ear from meatus (estimated), 14; noseleaf from margin of lip (dry), 10.

Cranial measurements of type: Greatest length, 20 (22.4);<sup>13</sup> basal length, 17 (20); basilar length, 15 (17); median palatal length, 9 (10); zygomatic breadth, 12 (13); mastoid breadth, 11 (12); interorbital constriction, 5 (6); mandible, 13 (14.6); maxillary tooththrow (exclusive of incisors), 7 (7.4); mandibular tooththrow (exclusive of incisors), 7 (7.4).

*Specimens Examined*.—Ten, from the following localities in northern Ecuador: San Javier, 2; Corondelet, 4; Pambilar, 4.

*Remarks*.—The series of ten specimens shows very little individual variation. In two skins from Corondelet the color is less yellow and more gray than in the others, a difference probably due to dichromatism.

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<sup>13</sup> Measurements in parentheses are those of an adult male *Dermanura tolteca* from Tetela del Vulcan, Morelos, Mexico (No. 53,051).

***Dermanura phæotis* sp. nov.**

*Type*.—Adult female (skin and skull), No. 108,176, United States National Museum (Biological Survey collection). Collected at Chichen Itza, Yucatan, February 10, 1901, by E. W. Nelson and E. A. Goldman. Original number, 14,537.

*Characters*.—Size and color as in *Dermanura rava*, but ears much darker and without the whitish border. Skull with broader, flatter rostrum than in the South American form.

*Form, Color, etc.*—In general appearance this bat so closely resembles *Dermanura rava* that no special description is necessary.

*Ears*.—In form the ears are similar to those of *Dermanura rava*, but they appear to be slightly larger, and in color they are a uniform darker brown, without trace of the whitish edging.

*Skull and Teeth*.—The skull closely resembles that of *Dermanura rava*, but the rostrum is broader and flatter and the median backward extension of the bony palate is wider. Molar teeth apparently a little narrower than in the related species.

*Measurements*.—External measurements of type: Tibia, 14; foot, 9 (8); forearm, 37; thumb, 9.6; second digit, 31; third digit, 78; fourth digit, 62; fifth digit, 57.

Cranial measurements of type: Greatest length, 19; zygomatic breadth, 11.6; mastoid breadth, 10.

*Specimens Examined*.—One, the type.

*Remarks*.—*Dermanura phæotis* is closely related to *D. rava*, but its characters are not closely approached by any of the ten specimens of the latter.

***Vampyrops fumosus* sp. nov.**

*Type*.—Adult female (skin and skull), No. 105,530, United States National Museum. Collected on the Purus river, Brazil, March 24, 1901, by J. B. Steere. Original number, 24.

*Characters*.—Related to *Vampyrops infuscus* Peters and *V. dorsalis* Thomas, but size larger and color paler than in either. Face stripes barely indicated. Dorsal line present, but very faint.

*Color*.—General color broccoli-brown, slightly darker on head and nape, slightly paler on shoulders and sides of neck, the under parts washed with ecru-drab. From noseleaf to ear can be traced a faint pale stripe, not different in color from the surrounding parts. Dorsal line whitish, extending from neck to rump. It is plainly visible when the fur is smooth, but a slight disarrangement of the

hairs causes it to disappear. Ears and membranes brown, not as dark as in *Vampyrops vittatus*, the only large species at hand.

*Skull and Teeth*.—The skull is considerably smaller than that of *Vampyrops vittatus*, but not noticeably different in form, except that the interorbital region is narrower and more distinctly concave. Anterior nares a little more produced backward than in the larger species.

Teeth as in *V. vittatus*, but uniformly much smaller, the outer upper incisors excepted. These are actually as well as relatively larger than in the larger animal.

*Measurements*.—External measurements of type (from skin): Head and body, 70; tibia, 24; foot, 13 (12); forearm, 56; thumb, 17; second digit, 46; third digit, 130; fourth digit, 93; fifth digit, 88; ear from meatus, 19; width of ear, 11.4.

Cranial measurements of type: Greatest length, — (30);<sup>14</sup> basal length, — (28); basilar length, — (24.4); median palatal length, 16 (16.6); interorbital constriction, 7 (7.6); zygomatic breadth, 18 (19); mastoid breadth, — (16); breadth of palate between middle molars, 8 (8.4); mandible, 21.8 (22.4); maxillary tooththrow (exclusive of incisors), 12 (12.6); front of canine to back of second molar, 11.6 (12); mandibular tooththrow (exclusive of incisors), 13 (13.4).<sup>15</sup>

*Specimen Examined*.—One, the type.

*Remarks*.—This species is readily distinguishable from *Vampyrops vittatus* by its smaller size, lighter color, and by the faintness of the face markings and dorsal line. In size it approaches *V. recifinus* and *V. infuscus*, though it is larger than either; forearm, 56, as opposed to 41 in *V. recifinus* and 52 in *V. infuscus*. From the latter it differs in the presence of the white dorsal line. The upper incisors probably show the first suggestion of the form found in *Vampyrops zarhinus* and *V. recifinus*, as the middle pair are smaller than in *V. vittatus*. They are, however, practically in contact with each other, though with a lens a slight space between them can be detected.

<sup>14</sup> Measurements in parentheses are those of an adult female *Vampyrops vittatus* from Valparaiso, Santa Marta region, Colombia (No. 15,101, Am. Mus. Nat. Hist.), kindly loaned by Dr. J. A. Allen.

<sup>15</sup> Some of the cranial measurements of the type of *V. recifinus* given by Thomas (*Ann. and Mag. Nat. Hist.*, 7th ser., VIII, p. 192, September, 1901) are as follows: Greatest length, 24; basal length, 19; front of canine to back of second molar, 8.4.

***Stenoderma luciae* sp. nov.**

*Type*.—Adult female (in alcohol), No. 110,921, United States National Museum. Collected on Santa Lucia Island, West Indies, February 4, 1901, by H. Selwyn Branch.

*Characters*.—Larger than *Stenoderma nicholli* of Dominica, its nearest geographical ally, and inner upper incisors more noticeably bifid. Much smaller than *S. montserratense*, and with a distinct white shoulder spot.

*Color*.—After a year's immersion in alcohol the color of the fur is a uniform clay color, that of the back, limbs and membranes strongly washed with wood-brown, that of the under parts somewhat lightened by faintly paler hair-tips. A small but very distinct whitish spot on shoulder at point where membrane joins body. Ears and noseleaf light-brown. Membranes dark-brown throughout, except that the antebrachium has a distinct pale border extending from base of thumb halfway to shoulder. Bones of fingers and distal half of forearm much lighter than membrane.

*Ears, Membranes, etc.*—The ears, membranes and external features in general are as in a topotype of *S. nicholli*.

*Skull*.—The skull is distinctly larger than that of *Stenoderma nicholli*, but of essentially the same form throughout.

Teeth much more robust than those of *S. nicholli*. The inner upper incisor is very distinctly bifid, in this respect differing notably from that of the related species. Crowns of first and second molars rather broader relatively to their length than in *S. nicholli*.

Posterior molar minute, its area scarcely more than half that of middle incisor. Second lower molar with outline of crown more nearly square than in *S. nicholli*.

*Measurements*.—External measurements of type: Head and body, 65 (53);<sup>16</sup> tibia, 19 (16.4); foot, 12.6 (12); foot without claws, 12 (11); forearm, 47 (44); thumb, 15 (11.6); second finger, 41 (36); third finger, 110 (96); fourth finger, 76 (70); fifth finger, 71 (66); ear from meatus, 18 (18); ear from crown, 14 (13.6); width of ear, 14 (14).

Cranial measurements of type: Greatest length, 23 (20.4); basal length, 20 (17); basilar length, 17 (15); interorbital constriction, 6 (5.4); zygomatic breadth, 15 (13.6); mastoid breadth, 12 (11); breadth of palate between middle molars, 4.4 (3.6); mandible,

<sup>16</sup> Measurements in parentheses are those of an adult male *S. nicholli*.

13.4 (12); maxillary tooththrow (exclusive of incisors), 7.6 (6.4); front of canine to back of second molar, 7.2 (6); mandibular tooththrow (exclusive of incisors), 8 (6.8).

*Specimens Examined*.—Four, all from the type locality.

*Remarks*.—*Stenoderma luciae* is readily distinguishable from *S. montserratense* by its smaller size and white-spotted shoulder, and from *S. nichollsi* by its larger size, heavier teeth, and distinctly bifid inner upper incisors.

**Hemiderma tricolor** sp. nov.

*Type*.—Adult ♀ (skin and skull), No. 114,005, United States National Museum. Collected in cave at Sapucay, Paraguay, December 5, 1901, by William Foster. Original number, 589.

*Characters*.—Size and general appearance as in *Hemiderma perspicillatum*, but fur longer and more silky in texture and the three color bands on the hairs of back strongly contrasted.

*Color*.—Hairs of dorsal surface with three sharply defined color bands. Beginning at base these are (*a*) hair-brown, much darker than that of Ridgway, 4 mm.; (*b*) grayish-white, 5 mm.; and (*c*) hair-brown like that of base, 2 mm. The extreme tips show a faint silvery-gray wash which varies in intensity according to light. As the fur is loose and silky in texture and everywhere glossy and variable with light the combination of colors is difficult to describe. On crown of head, sides of neck and region between and immediately behind shoulders the grayish-white appears conspicuously at surface, but elsewhere the hair-brown is in excess. The slightest disarrangement of the hairs brings the light band prominently into view. The color pattern of the back may be traced across under surface of neck, though much dulled. On chest and belly the basal area is a dull brownish slate color, succeeded by a narrow silvery-grayish band and a still narrower terminal strip of broccoli-brown. The extreme tips have the same gloss as those of the back, but the general color is broccoli-brown.

*Skull and Teeth*.—The skull and teeth do not differ appreciably from those of *Hemiderma perspicillatum*.

*Measurements*.—External measurements of type: Head and body, 68;<sup>17</sup> tibia, 16.4; foot, 13 (11); forearm, 42; thumb, 13; second finger, 32; third finger, 91; fourth finger, 65; fifth finger, 66; ear from meatus, 20.

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<sup>17</sup> From fresh specimen, by collector.

Cranial measurements of type: Greatest length, 22.4; basal length, 19.6; basilar length, 17.6; interorbital constriction, 5.6; mastoid breadth, 10.8; mandible, 15; maxillary tooththrow (exclusive of incisors), 7.4; mandibular tooththrow (exclusive of incisors), 8.

*Specimens Examined.*—Six, all from the type locality.

*Remarks.*—Adults are very uniform in coloration, the five specimens showing no variations worthy of note. A half-grown young is dark sooty brown above, dull slaty below. The tricolored pattern of the hairs of the back is nearly as distinct as in the adults, and much more so than in *Hemiderma perspicillatum*.

***Brachyphylla nana* sp. nov.**

*Type.*—Skull No. 103,828, United States National Museum. Collected at El Guama, Cuba, March 10, 1900, by William Palmer and J. H. Riley. Original number, 108.

*Characters.*—External characters not known. Skull much smaller than that of any other described member of the genus, its basal length only 22 mm.

*Skull.*—In general form the skull closely resembles that of true *Brachyphylla cavernarum* from the island of St. Vincent, but the interorbital region is less rounded and the interpterygoid fossa extends forward to within 1 mm. of posterior outline of palate.

*Teeth.*—The only teeth preserved are the anterior maxillary molars. These differ very conspicuously from the corresponding teeth of *B. cavernarum* in their much smaller size and in the relatively greater breadth of the palatal side of the crown.

*Measurements.*—Basal length, 22 (28);<sup>18</sup> basilar length, 21.6 (25); median palatal length, 10.4 (14); zygomatic breadth, 14.6 (17.4); breadth of braincase above roots of zygomata, 12 (13); interorbital constriction, 6 (6.8); lachrymal breadth, 8.4 (9); distance between outer edges of anterior upper molars, 9.8 (11); distance between inner edges of anterior upper molars, 5 (5.6); maxillary tooththrow (alveoli, exclusive of incisors), 9 (11); crown of first upper molar, 3 x 2.6 (3.4 x 2.8).

*Specimen Examined.*—One, the type.

*Remarks.*—The single skull on which this species is based was found in a pellet of the Cuban barn owl. This and other

<sup>18</sup> Measurements in parentheses are those of a topotype of *Brachyphylla cavernarum* (♂, No. 106,085).

pellets of the same birds contained remains of *Artibeus*, *Phyllostonycteris poeyi* and *Mus alexandrinus*.

***Monophyllus cubanus* sp. nov.**

*Type*.—Adult male (skin and skull), No. 113,674, United States National Museum. Collected at Baracoa, eastern Cuba, February 6, 1902, by William Palmer. Original number, 645.

*Characters*.—Nearest the Jamaican *Monophyllus redmani*, but size less and skull with narrower rostrum and less deep posterior portion of mandible.

*Color*.—Upper parts broccoli-brown, rather darker than Ridgway's Plate III, No. 15, except in region across shoulders. Beneath ecru-drab, much tinged with dull brown. In some skins the brown of the upper parts approaches prouts-brown. Ears and membranes blackish.

*Skull and Teeth*.—The skull resembles that of *Monophyllus redmani* in general appearance, but the rostrum is much more slender, a character equally noticeable whether viewed from above or below.

Zygomatic similar in form to those of *M. redmani*, but more lightly built. Mandible more slender than that of *M. redmani*, the difference particularly noticeable in the posterior portion, where depth at a point midway from coronoid process to condyle is much less relatively to distance between these points than in the Jamaican animal.

Teeth as in *Monophyllus redmani*.

*Measurements*.—External measurements of type: Total length, 67; tail, 8; tibia, 16; foot, 11 (10); forearm, 38.6; thumb, 11; second finger, 35; third finger, 80; fourth finger, 57; fifth finger, 50; ear from meatus, 13; ear from crown, 11.4; width of ear, 7.6.

Cranial measurements of type: Greatest length, 21.4 (22.4);<sup>19</sup> basal length, 20 (21.4); basilar length, 18 (19.4); zygomatic breadth, 9.6 (10); least interorbital breadth, 4 (4); breadth of rostrum at space between premolars, 3.2 (4); greatest breadth of braincase, 9 (9); maxillary toothrow (exclusive of incisors), 8 (8.6); mandible, 14 (15.4); mandibular toothrow (exclusive of incisors), 8.4 (9).

*Specimens Examined*.—Fifty-six (9 skins), all from the type locality.

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<sup>19</sup> Measurements in parentheses are those of an adult male *Monophyllus redmani* from Kingston, Jamaica (No. 64,480).

*Remarks.*—*Monophyllus cubanus* is readily distinguishable from *M. redmani* by its small size and lightly built skull. In the general form of both skull and teeth it is, however, more closely related to the large Jamaican species than to the smaller members of the genus.

***Monophyllus luciae* sp. nov.**

*Type.*—Adult male (in alcohol), No. 106,095, United States National Museum. Collected on Santa Lucia Island, West Indies, February 4, 1901, by H. Selwyn Branch.

*Characters.*—Most nearly resembling *Monophyllus plethodon* of Barbados, but larger and with less crowded teeth.

*Color.*—After about a year's immersion in rum the specimens are rather darker and more tinged with red than in *Monophyllus cubanus*, but this character may be the result of the action of the preservative fluid.

*Skull and Teeth.*—In general form the skull agrees with that of *Monophyllus plethodon*, and differs from that of *M. redmani* and *M. cubanus* in the large, inflated braincase, broad interorbital region and short rostrum. The zygomatic arches are strong and well developed, more so, apparently, than in *M. plethodon*. Rostrum broader than in the Barbados species.

Teeth as in *Monophyllus plethodon*, except that the first upper premolar is separated from the canine and also from the second premolar by a narrow space, of much less extent, however, than in the other members of the genus.

*Measurements.*—External measurements of type: Total length, 80; tail, 15; tibia, 19; foot, 11 (10); forearm, 42; thumb, 11; second finger, 35; third finger, 88; fourth finger, 65; fifth finger, 55; ear from meatus, 15; ear from crown, 11; width of ear, 10.4.

Cranial measurements of type: Greatest length, 24 (21.6);<sup>20</sup> basal length, 22 (19.4); basilar length, 19.6 (17.8); zygomatic breadth, 10 (9.8); least interorbital breadth, 4.4 (4.6); breadth of rostrum at space between premolars, 4.6 (—); greatest breadth of braincase, 9.8 (9.8); maxillary toothrow (exclusive of

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<sup>20</sup> Measurements in parentheses are those of the type of *Monophyllus plethodon*.



incisors), 8 (7.2); mandible, 15 (14); mandibular toothrow (exclusive of incisors), 8.4 (7.8).

*Specimens Examined.*—Sixteen, all from the type locality.

*Remarks.*—As might be expected, the *Monophyllus* of Santa Lucia is nearly related to that of Barbados. Its larger size and less crowded teeth readily distinguish it.